Data Taking Jan 26 – Feb 1

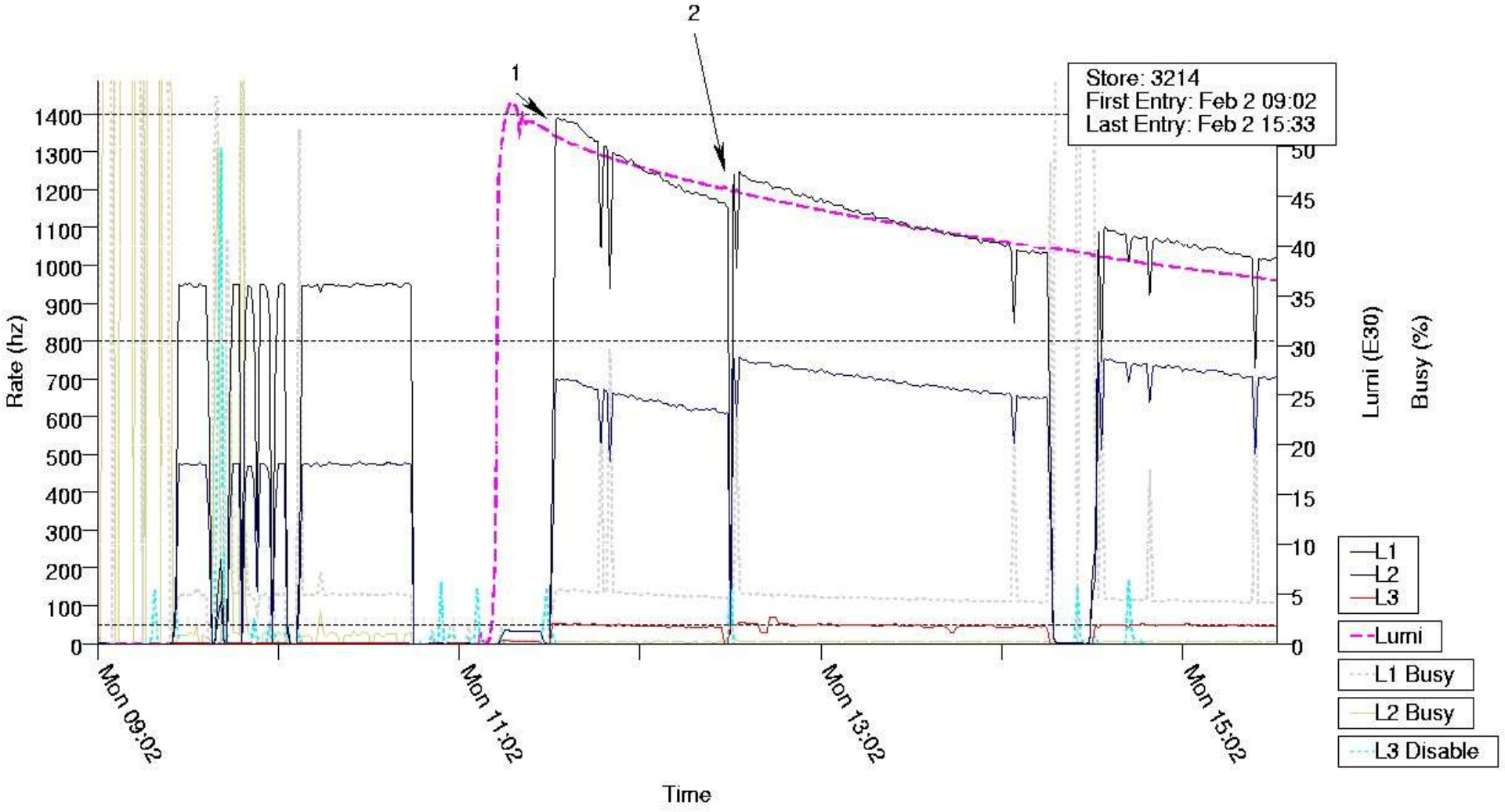
Day	*∫L dt (del)*	*∫L dt (rec)*	*Efficiency*
Mon Jan 26	555nb^{-1}	499nb^{-1}	89.9%
Tue Jan 27	1035nb^{-1}	909nb^{-1}	87.9%
Wed Jan 28	965nb^{-1}	843nb^{-1}	87.4%
Thu Jan 29	851nb^{-1}	555nb^{-1}	65.3%
Fri Jan 30	123nb^{-1}	91nb^{-1}	74.2%
Sat Jan 31	1487nb^{-1}	0nb^{-1}	0.0%
Sun Feb 1	2106nb^{-1}	1838nb^{-1}	87.3%
This week	**7120nb^{-1}**	**4736nb^{-1}**	**66.5%**
Best week	**8489nb^{-1}**	**7766nb^{-1}**	**91.5%**

SMT problems

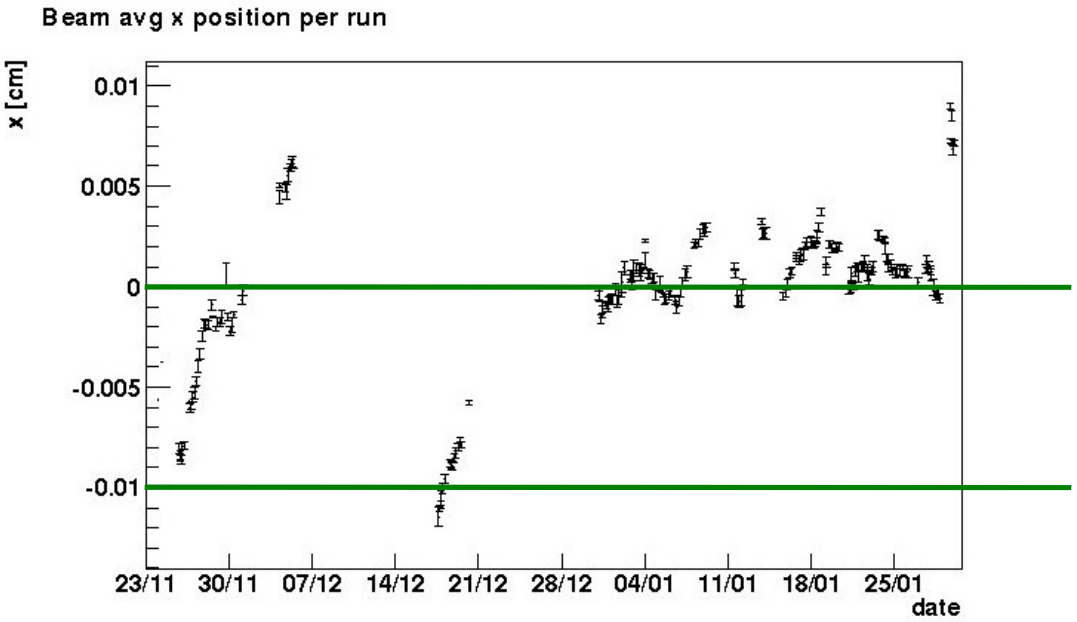
All-time best

Congratulations for today's record store – we started data taking within 3 minutes after the store was declared

First 4 Hours of Store 3214

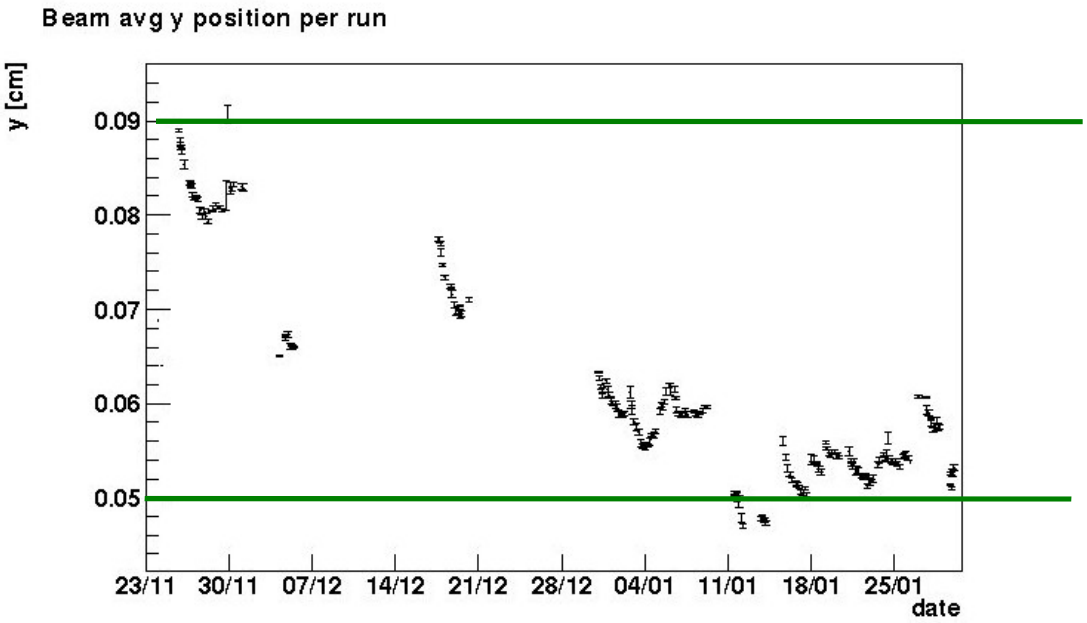


Beam Spot



0

0.1mm

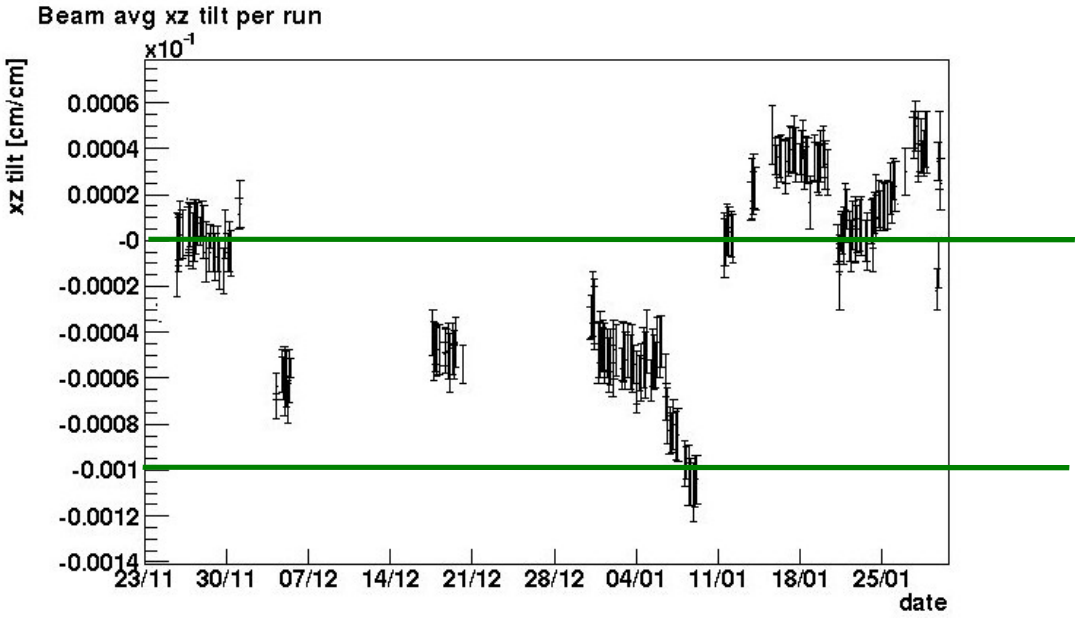


0.9mm

0.5mm

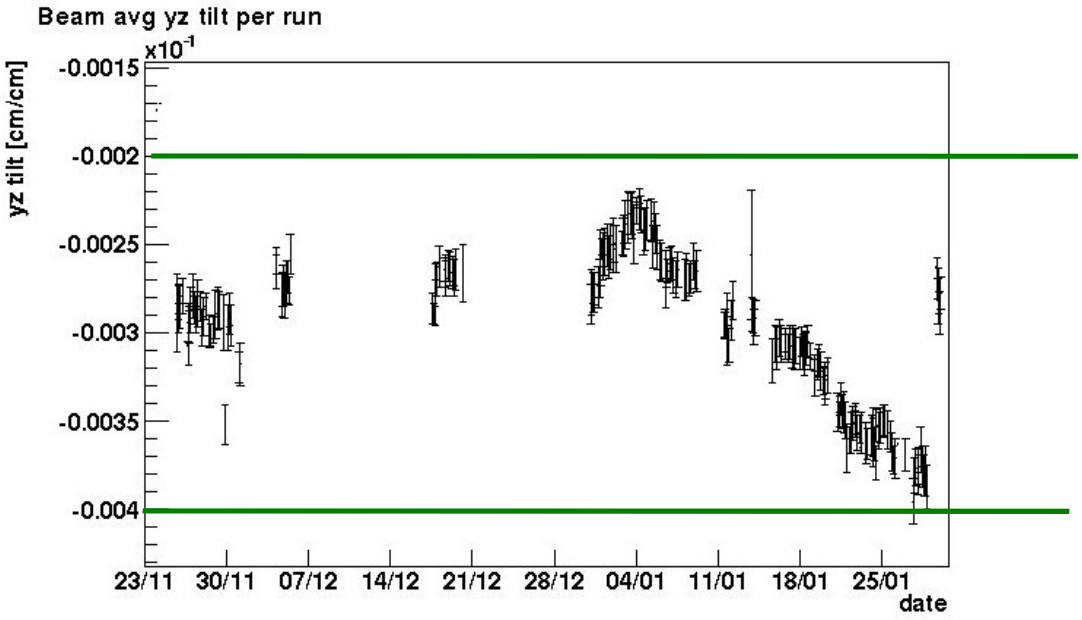
Within specifications (<1mm)

Beam Tilt



0

100μrad



200μrad

400μrad

Horizontal:
almost perfect

Vertical:
close to critical

specification:
<200μrad

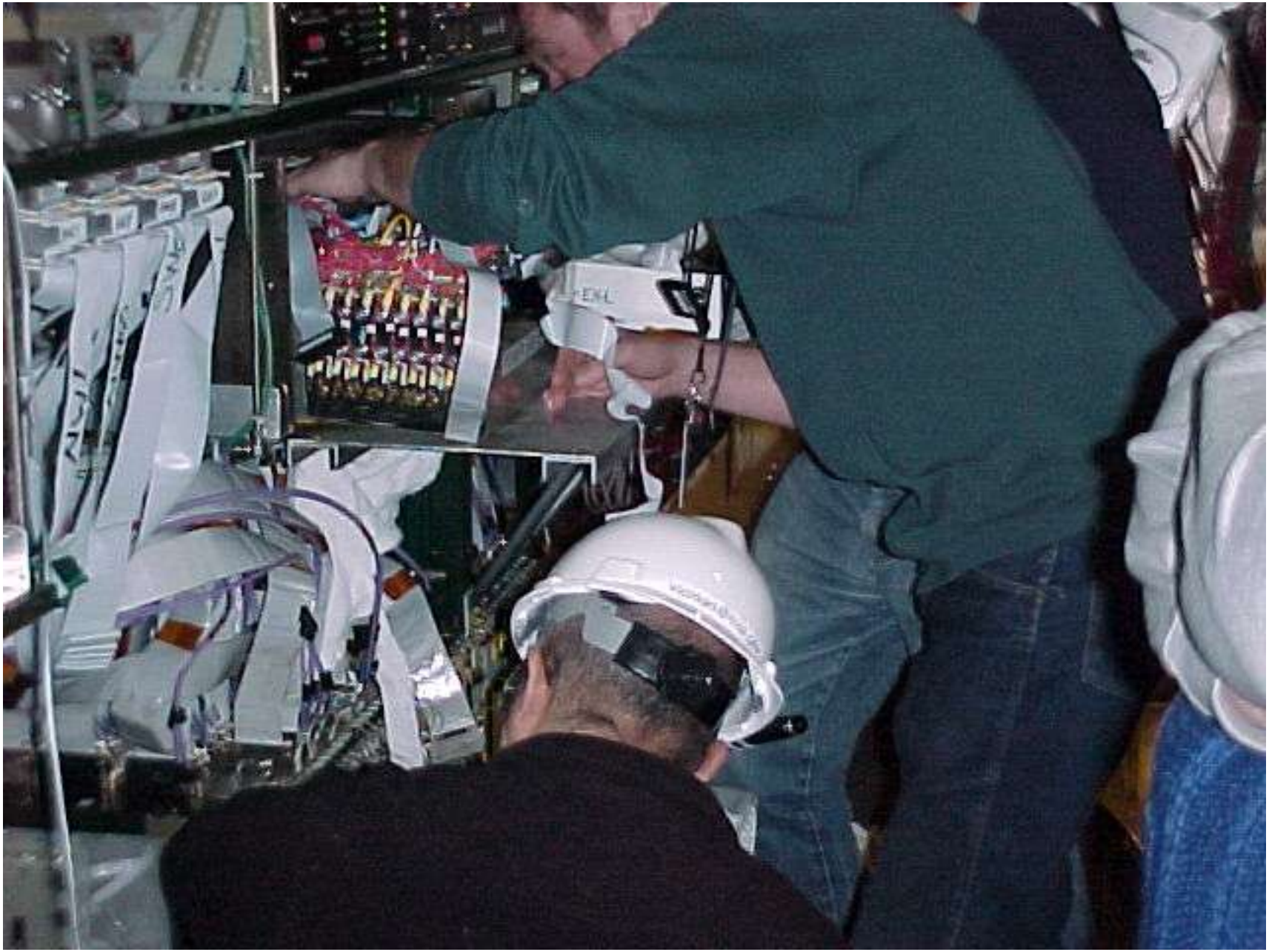
Silicon Saga

- Beginning on Thursday around 6pm, we observed frequent (~ once per hour) ***trips of the Silicon power supplies on the East*** side (water drip detection)
- After several attempts to recover, the Silicon was left off, we requested an access, and continued to take data without half of the Silicon detectors
- Access started Friday 6:30 am. We expected one shift to complete the work (cathedral area)
- Experts quickly discovered that *trips were the result of a malfunction of the water drip detection system* (loose connections). Fix took about 5 hours – multiple layers of Silicon cables complicated the work. Bypassed the drip sensor, since water in that crate is not flowing following an earlier (real) water leak.
- Friday 2pm: Ready to start closing the detector, beginning to power up Silicon

Connectors not fully seated

Silicon Saga cont.

- On power-up, ***failed on one of the power supplies on the West side***. Had no choice but to open up the West side as well
- After opening, discovered a **real water leak**. Found water accumulation in the power supply, rust, and apparently water had dripped on one of the interface boards located below the power supply, causing it to fail. Water leak was too small to trip the drip detectors
- The leak was quickly fixed, and it was attempted to dry the power supply in place. Gave up after 1.5 hours
- A **spare power supply was installed**, only to find that it was not holding as well. Suspicion that boards in the crate might be responsible, but couldn't find anything conclusive within the next 2 hours
- Friday 7pm... it's getting late – technicians have been around for more than 12 hours. Called MCR for search & secure, sending tech crew home
- Before S&S team arrived, swapped in another (not fully tested) spare power supply – this one worked!

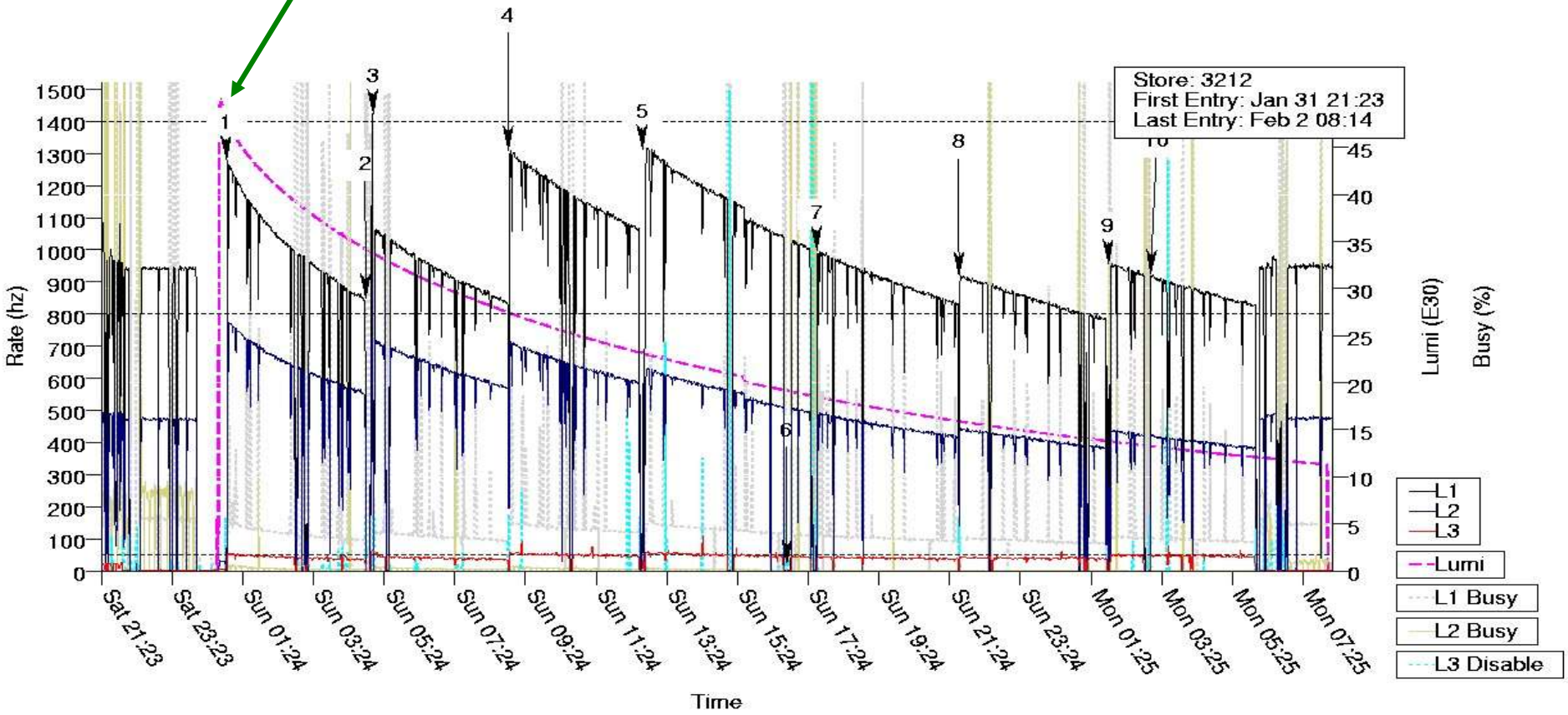


Silicon Saga cont.

- Spent the next store (Saturday) collecting special runs for calorimeter. Detector in open configuration, magnets off
- Went in again Saturday 17:00 for 4 hours to close the power supply, install the replacement for the damaged interface board, adjust voltages, perform a system test, and finally close the detector
- In summary
  - The originally scheduled work on the East side was performed efficiently and in time
  - Another major problem ("luckily"?!?) uncovered itself during the access, and required an extension and a second access
  - Thanks to the hard effort of Silicon experts, and the mechanical and electrical support teams, all problems were resolved as quickly as possible, and we came out of the access without any remaining damage

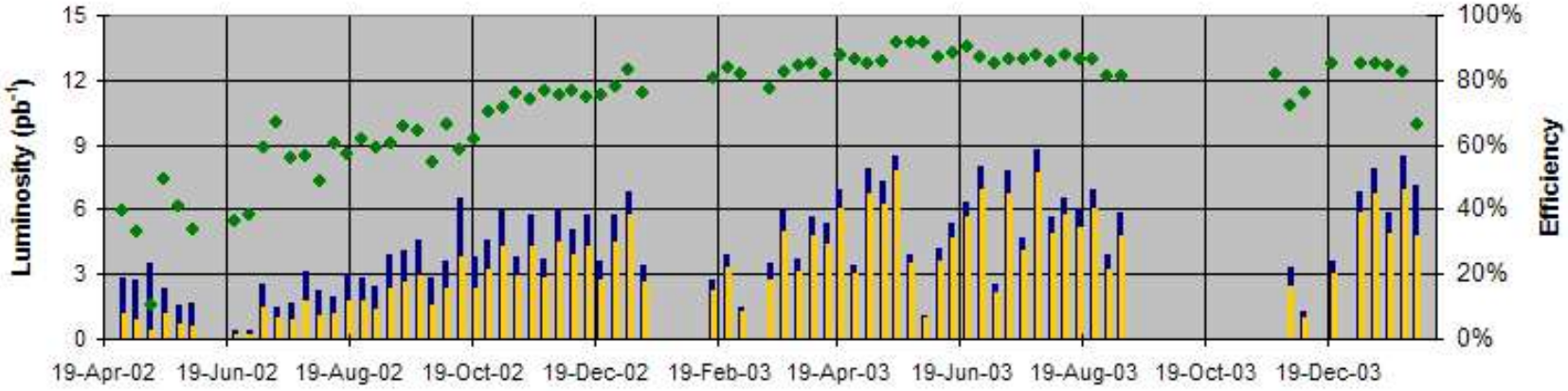
Store 3212 (Sun/Mon)

Initial Lum. $4.9 \cdot 10^{31} cm^{-2} s^{-1}$



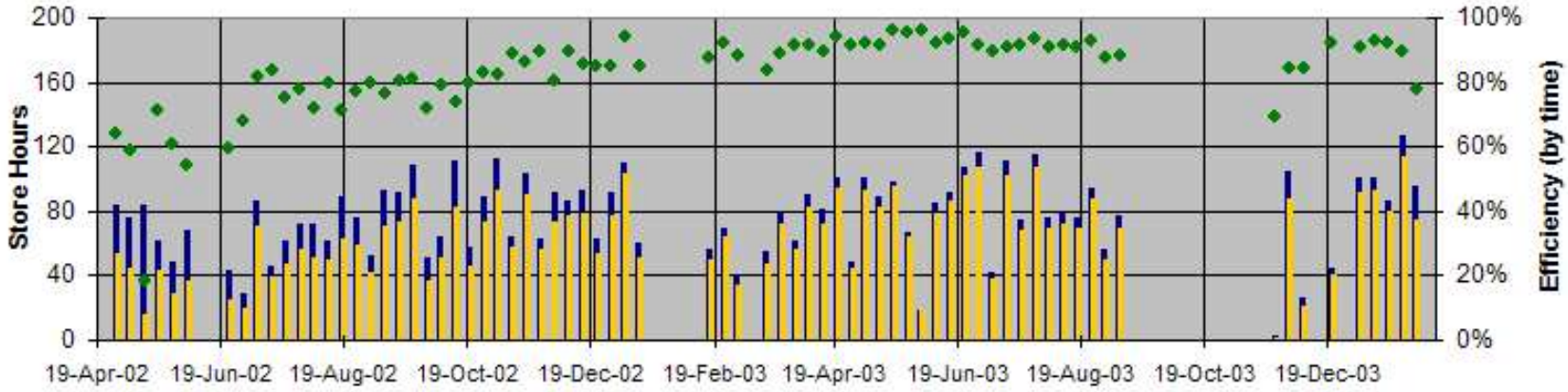
Reasonably smooth data taking after the mini-shutdown

Weekly Summary (22 April 2002 - 2 February 2004)

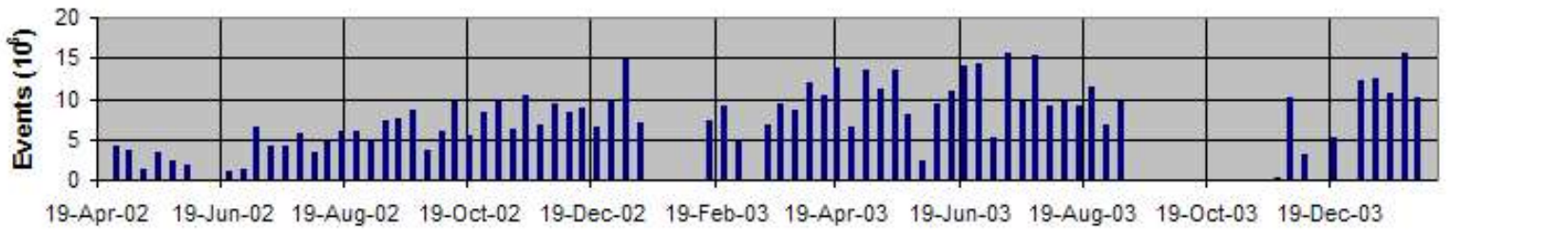


67%

7.1pb^{-1}
4.7pb^{-1}



94.8 hrs
74.0 hrs



$10.1 \cdot 10^6$

January was best month ever: recorded 26pb^{-1} and 55 Million events